

## APPENDIX B

### Prohibited Species Catch in the BSAI in 2003

updated by Jane DiCosimo

Information is presented on the bycatch of prohibited species in the groundfish fisheries conducted in the Bering Sea/Aleutian Islands management area (BSAI). It is intended to assist the Council in its recommendation of prohibited species catch (PSC) limits and seasonal apportionments of crab and halibut, and provide bycatch information on other prohibited species. Regulations have been implemented to reduce bycatch of red king crab, Tanner crab, snow crab, halibut, herring, and salmon taken in groundfish fisheries. The following is a summary of these management measures.

**Red King Crab:** A stairstep based PSC limit for red king crab in Zone 1 was established as part of Amendment 37. PSC limits are based on abundance of Bristol Bay red king crab as follows:

- (A) When the number of mature female red king is equal to or below the threshold number of 8.4 million crab, or the effective spawning biomass (ESB) is less than 14.5 million pounds, the Zone 1 red king crab PSC limit would be 35,000 crabs;
- (B) when the number of mature female red king crab is above threshold, and the ESB is equal to or greater than 14.5 but less than 55 million pounds, the Zone 1 red king crab PSC limit would be 100,000 crabs; and
- (C) when the number of mature female red king crab is above threshold, and the ESB is equal to or greater than 55 million pounds, the Zone 1 red king crab PSC limit would be 200,000 crabs.

Note that Amendment 57 contained a provision to reduce red king crab bycatch by an additional 3,000 crabs as part of the regulation prohibiting the use of bottom trawl gear for pollock fisheries. **Based on the 2003 estimate of effective spawning biomass (60.7 million pounds), and the 3,000 crab reduction for Amendment 57, the PSC limit for 2004 will be 197,000 red king crabs.** The red king crab cap has generally been allocated among the pollock/mackerel/other species, Pacific cod, rock sole, and yellowfin sole fisheries. Once a fishery exceeds its red king crab PSC limit, Zone 1 is closed to that fishery for the remainder of the year, unless further allocated by season.

**Tanner Crab:** Separate Tanner (*C. bairdi*) crab PSC limits are set for Zone 1 and Zone 2. These limits may be further allocated among the pollock/mackerel/other species, Pacific cod, rock sole, turbot/sablefish/arrowtooth, rockfish, and yellowfin sole fisheries. When a fishery exceeds its PSC limit in one zone, trawling is closed for that zone for the remainder of the year.

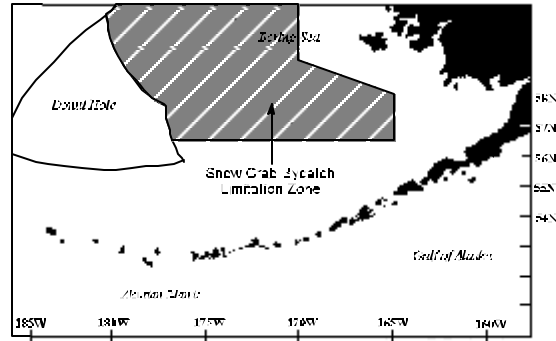
Under Amendment 41, PSC limits for *bairdi* in Zones 1 and 2 are based on total abundance of *bairdi* crab as indicated by the NMFS trawl survey. These limits are further reduced by 50,000 as prescribed by proposed Amendment 57. **Based on 2003 abundance (448.78 million crabs), and the**

#### Amendment 41 PSC limits adopted for bairdi Tanner crab.

<u>Zone</u>	<u>Abundance</u>	<u>PSC Limit</u>
Zone 1	0-150 million crabs	0.5% of abundance
	150-270 million crabs	750,000
	270-400 million crabs	850,000
	over 400 million crabs	1,000,000
Zone 2	0-175 million crabs	1.2% of abundance
	175-290 million crabs	2,100,000
	290-400 million crabs	2,550,000
	over 400 million crabs	3,000,000

**Amendment 57 adjustment, the PSC limit for *C. bairdi* in 2004 will be 980,000 (1,000,000 minus 20,000) crabs in Zone 1 and 2,970,000 (3,000,000 minus 30,000) crabs in Zone 2.**

**Snow Crab:** Under Amendment 40, PSC limits for snow crab (*C. opilio*) are based on total abundance of *opilio* crab as indicated by the NMFS standard trawl survey. The snow crab PSC cap is set at 0.1133% of the Bering Sea snow crab abundance index, with a minimum PSC of 4.5 million snow crab and a maximum of 13 million snow crab. This number is further reduced by 150,000 crabs as part of Amendment 57. **Based on the 2003 survey estimate of 2.63 billion crabs, the 2004 *opilio* crab PSC limit will be 4,350,000 crabs (4,500,000 minus 150,000).**



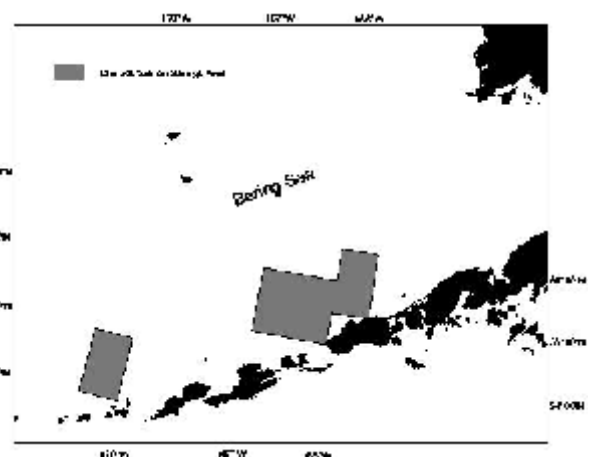
Location of the snow crab bycatch limitation zone.

Snow crab taken within the “Snow Crab Bycatch Limitation Zone” accrue towards the PSC limits established for individual trawl fisheries. Upon attainment of a snow crab PSC limit apportioned to a particular trawl target fishery, that fishery is prohibited from fishing within the snow crab zone.

**Halibut:** Halibut PSC is measured in metric tons of halibut mortality and allocated among trawl and hook & line gear. PSC amounts have been 3,775 mt for trawl and 900 mt for hook & line gear. As part of Amendment 57, the trawl PSC amount is reduced by 100 mt to reflect the prohibition on the use of bottom trawl gear in the pollock fishery. The annual trawl halibut PSC is allocated among the Pacific cod, yellowfin sole, rock sole, pollock/mackerel/other species, rockfish, and sablefish/turbot/arrowtooth fisheries. Both the trawl and hook and line PSC limits are seasonally allocated among fisheries. When a fishery exceeds its seasonal limit, the entire Bering Sea is closed for that fishery for the remainder of the season.

**Herring:** The herring PSC limit is set at 1% of stock biomass. Once the PSC limit has been obtained, one or all of the three designated Herring Savings Areas closes, depending on the time of the year.

**Chinook Salmon:** The chinook PSC limits were first established by Amendment 21b which closed specified areas to trawling if and when 48,000 chinook salmon were bycaught. In 1999, the Council adopted Amendment 58 to reduce the amount of chinook salmon allowed to be taken as bycatch in BSAI trawl fisheries. Specifically, the alternative adopted did the following (1) reduced the chinook salmon bycatch limit from 48,000 to 29,000 chinook salmon over a 4-year period, (2) implemented year-round accounting of chinook salmon bycatch in the pollock fishery, beginning on January 1 of each year, (3) revised the boundaries of the Chinook Salmon Savings Areas, and (4) set more restrictive closure dates. The bycatch limit for 2002 fisheries was set at 33,000 chinook salmon. These areas will be then re-opened to trawling on April 16th for the remainder of the year. **The bycatch limit for 2004 fisheries will be set at 29,000 chinook salmon.**



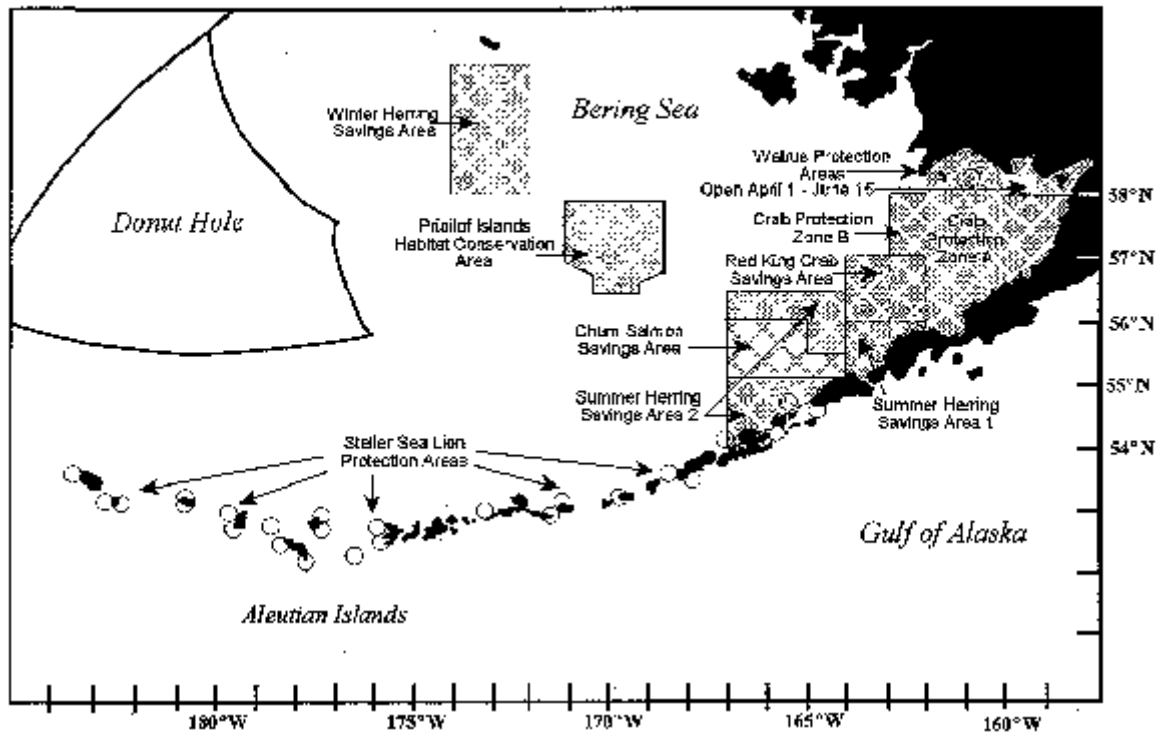
Location of the chinook salmon savings areas in the BSAI, as modified by Amendment 58.

**Chum Salmon:** A chum salmon PSC reduction plan was established by Amendment 35. Under this plan, the Chum Salmon Savings Area is closed from August 1 to September 1, but this area opens September 2, unless the 42,000 cap is reached (accounting to begin August 15 in the CVOA). If the cap is reached the fishery will open October 15th.

Please refer to Figure 1 for the location of Bering Sea Species Protection Areas discussed above. PSC apportionments of red king crab, Tanner crab, and halibut for the 2003 trawl fisheries are shown in Table 1. The 2003 bycatch harvest to date are listed in Tables 2-4.

Figure 1

## Bering Sea Marine Protected Areas



**Nearshore Bristol Bay Closure Area:** prohibits all trawling at all times in the EEZ within the area east of 162° W longitude with the exception of an area bounded by 159° to 160° W and 58° to 58°43' N that would remain open April 1 - June 15.

**Chum Salmon Savings Area:** closed to all trawling August 1-31 with provisional extension to October 15.

**Chinook Salmon Savings Area** (not shown): closed to all trawling when 48,000 chinooks are taken.

**Bristol Bay Red King Crab Area:** closed seasonally to non-pelagic trawling.

**Pribilof Islands Habitat Conservation Area:** closed year-round to all trawling.

**Crab Protection Zones:** Zone A closed to trawling year-round.  
Zone B closed to trawling March 15 - June 15.

**Crab Bycatch Limitation Zones** (not shown): closed to specified trawl fisheries when limits are reached.

**C. Opilio Bycatch Limitation Zones** (not shown): closed to specified trawl fisheries when limits are reached.

**Walrus Protection Areas:** closed to all fishing April 1 - September 30.

**Steller Sea Lion Protection Areas:** closed to all trawling year-round with some extended seasonally on January 20.

**Herring Savings Areas:** closed to all trawling when trigger reached.  
Summer Area 1 closed June 15 - July 1.  
Summer Area 2 closed July 1 - August 15.  
Winter Area closed September 1 - March 1.

Table 1.

PROHIBITED SPECIES BYCATCH ALLOWANCES FOR THE BSAI TRAWL AND NON-TRAWL FISHERIES <sup>1</sup> [All amounts are in metric tons]						
TRAWL FISHERIES	Prohibited Species and Zone					
	Halibut mortality (mt) BSAI <sup>2</sup>	Herring (mt) BSAI	Red King Crab (animals) Zone 1	C. opilio (animals) COBLZ <sup>3</sup>	C. bairdi (animals)	
					Zone 1	Zone 2
Yellowfin sole	886	139	16,664	2,776,981	340,844	1,788,459
January 20 - April 1	262	.....	.....	.....	.....	.....
April 1 - May 21	195	.....	.....	.....	.....	.....
May 21 - June 29	49	.....	.....	.....	.....	.....
June 29 - December 31	380	.....	.....	.....	.....	.....
Rock sole/flat sole/other flatfish <sup>4</sup>	778	20	59,782	968,130	365,320	596,154
January 20 - April 1	448	.....	.....	.....	.....	.....
April 1 - June 29	164	.....	.....	.....	.....	.....
June 29 - December 31	167	.....	.....	.....	.....	.....
RKC savings subarea <sup>5</sup>	.....	.....	20,924	.....	.....	.....
Turbot/sablefish/arrowtooth <sup>6</sup>	.....	9	.....	40,238	.....	.....
Rockfish (June 29 - Dec. 31) <sup>7</sup>	69	7	.....	40,237	.....	10,988
Pacific cod	1,434	20	13,079	124,736	183,112	324,176
Pollock/Atka/other <sup>8</sup>	232	146	200	72,428	17,224	27,473
Midwater trawl pollock	.....	1,184	.....	.....	.....	.....
<b>TOTAL TRAWL PSC</b>	<b>3,400</b>	<b>1,526</b>	<b>89,725</b>	<b>4,023,750</b>	<b>908,500</b>	<b>2,747,250</b>
<b>NON-TRAWL FISHERIES</b>						
Pacific cod - Total	775	.....	.....	.....	.....	.....
January 1 - June 10	320	.....	.....	.....	.....	.....
June 10 - August 15	0	.....	.....	.....	.....	.....
August 15 - December 31	455	.....	.....	.....	.....	.....
Other non-trawl - Total	58	.....	.....	.....	.....	.....
May 1 - December 31	58	.....	.....	.....	.....	.....
Groundfish pot & jig	Exempt	.....	.....	.....	.....	.....
Sablefish hook-&-line	Exempt	.....	.....	.....	.....	.....
<b>TOTAL NON-TRAWL</b>	<b>833</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>
<b>PSQ RESERVE<sup>9</sup></b>	<b>342</b>	<b>.....</b>	<b>7,275</b>	<b>328,250</b>	<b>73,500</b>	<b>222,750</b>
<b>GRAND TOTAL</b>	<b>4,575</b>	<b>1,526</b>	<b>97,000</b>	<b>4,350,000</b>	<b>980,000</b>	<b>2,970,000</b>

<sup>1</sup> Refer to § 679.2 for definitions of areas.

<sup>2</sup> C. opilio Bycatch Limitation Zone. Boundaries are defined at 50 CFR part 679, fig. 13.

<sup>3</sup> The Council at its December 2001 meeting limited red king crab for trawl fisheries within the RKCSS to 35 percent of the total allocation to the rock sole/flathead sole/ "other flatfish" fishery category (§ 679.21(e)(3)(ii)(B)).

"Other flatfish" for PSC monitoring includes all flatfish species, except for Pacific halibut (a prohibited species), Greenland turbot, rock sole, yellowfin sole, arrowtooth flounder.

<sup>4</sup> Greenland turbot, arrowtooth flounder, and sablefish fishery category.

<sup>5</sup> The Council at its December 2001 meeting apportioned the rockfish PSC amounts from June 30 - December 31.

<sup>6</sup> Pollock other than pelagic trawl pollock, Atka mackerel, and "other species" fishery category.

<sup>7</sup> With the exception of the nontrawl Pacific cod directed fishery, any unused halibut PSC apportionment may be added to the following season's apportionment. Any unused halibut PSC apportioned to the nontrawl Pacific cod directed fishery during the January 1 through June 10 time period will not be available until after August 15.

<sup>8</sup> With the exception of herring, 7.5 percent of each PSC limit is allocated to the multi-species CDQ program as PSQ reserve. The PSQ reserve is not allocated by fishery, gear or season.

Table 2.







Table 3.

